Name: Section:

1. Find the derivative of $f(x) = x^2 \sec(5x) + \sqrt{9x - 2\cos x}$

2. Compute the integral $\displaystyle\int \frac{\cos x}{(1 + 3\sin x)^7}\, dx$

3. Compute the limit $\lim\limits_{x \to \infty} \dfrac{\sqrt[3]{x^2 - 1}}{x}$

4. Indicate whether the following functions are one-to-one or not. For the ones that are one-to-one, draw their inverse on the same plot.